VERSION WITH MARKINGS SHOWING CHANGES MADE

IN THE SPECIFICATION:

Please see attached copy of cancelled specification.

IN THE CLAIMS:

Claims 24, 42, 48, 70, 73, 74, 88 and 92 have been amended as follows:

24. (Amended) A method for adaptively duplexing transmissions in a communication link using a time division duplexing scheme wherein transmissions are communicated in an uplink direction during uplink time slots and wherein transmissions are communicated in a downlink direction during downlink time slots, comprising the steps of:

    (a)   determining an uplink bandwidth requirement and a downlink bandwidth requirement of the communication link, wherein the uplink and downlink bandwidth requirements are determined using associated and respective uplink and downlink bandwidth utilization parameters;

    (b)   calculating an uplink/downlink bandwidth requirement ratio based upon the uplink and downlink bandwidth requirements of the link;

    (c)   allocating uplink and downlink time slots in a frame in response to the calculated uplink/downlink bandwidth ratio; and

    periodically enabling uplink transmissions during the allocated uplink time slots and downlink transmissions during the allocated downlink time slots.

42. (Amended) An apparatus for adaptively duplexing transmissions in a communication link of a wireless communication system using a time division duplexing scheme wherein transmissions are communicated in an uplink direction during uplink time slots and wherein transmissions are communicated in a downlink direction during downlink time slots, comprising:

    (a)   means for determining an uplink bandwidth requirement and a downlink bandwidth requirement of the communication link, wherein the uplink and downlink bandwidth requirements are determined using associated and respective uplink and downlink bandwidth utilization parameters;

(b)   means, responsive to the determining means, for calculating an uplink/downlink bandwidth requirement ratio based upon the uplink and downlink bandwidth requirements of the link;

(c)   means, responsive to the calculating means, for allocating uplink and downlink time slots in a frame; and

means for periodically enabling uplink transmissions during the allocated uplink time slots and downlink transmissions during the allocated downlink time slots.

48. (Amended) A method for duplexing transmissions in a communication link using a time division duplexing scheme wherein transmissions are communicated in an uplink direction during uplink time slots and wherein transmissions are communicated in a downlink direction during downlink time slots, comprising the steps of:

(a)   determining uplink and downlink bandwidth requirements in accordance with associated and respective quality of service parameters to establishing an uplink/downlink bandwidth requirement ratio;

(b)   allocating uplink and downlink time slots in a frame in response to the uplink/downlink bandwidth ratio; and

(c)   periodically enabling uplink transmissions during the allocated uplink time slots and downlink transmissions during the allocated downlink time slots.

70. (Amended) A method for monitoring and updating uplink and downlink bandwidth requirements in a wireless communication system including a base station and at least one CPE, the method comprising:

initializing the base station with an initial set of bandwidth utilization parameters, including a first estimate of the uplink and downlink bandwidth requirements of at least one CPE in a frame;

monitoring bandwidth use by the at least one CPE and the base station; and

updating the initial set of bandwidth utilization parameters with an actual set of bandwidth utilization parameters based on the monitoring.

73. (Amended) A method for adaptively duplexing transmissions in a communication link using a time division duplexing scheme wherein transmissions are communicated in an uplink direction during uplink time slots and wherein transmissions are communicated in a downlink direction during downlink time slots, the method comprising:

determining an initial uplink bandwidth requirement and an initial downlink bandwidth requirement of the communication link;

calculating an initial uplink/downlink bandwidth requirement ratio based upon the initial uplink and initial downlink bandwidth requirements of the link;

allocating initial uplink and downlink time slots in a frame in response to the calculated initial uplink/downlink bandwidth ratio;

transmitting information during the initial uplink and downlink time slots;

determining an actual uplink bandwidth requirement and an actual downlink bandwidth requirement based on the transmission during the initial uplink and downlink time slots;

calculating an actual uplink/downlink bandwidth requirement ratio based upon the actual uplink and actual downlink bandwidth requirements of the link;

allocating actual uplink and downlink time slots in response to the calculated actual uplink/downlink bandwidth ratio; and

transmitting information during the actual uplink and downlink time slots.

74. (Amended) A wireless communication system for transmitting frames of data wherein each frame of data includes an uplink subframe portion and a downlink subframe portion using adaptive time division duplexing, the system comprising:

at least one CPE configured to demodulate the downlink subframe portion and modulate the uplink subframe portion; and

a base station configured to demodulate the uplink subframe portion and modulate the downlink subframe portion, wherein the lengths of the uplink and downlink subframe portions of each frame of data are based on the uplink bandwidth requirement of the at least one CPE and the downlink bandwidth requirement of the base station.

88. (Amended) A method for adaptively duplexing transmissions between a base station and at least one CPE using a series of uplink and downlink frames of information in an adaptive time division duplexing scheme, wherein transmissions are communicated in an uplink direction during uplink time slots and wherein transmissions are communicated in a downlink direction during downlink time slots, comprising:

selecting a first service type for an uplink transmission;

selecting a second service type for a downlink transmission;

determining an uplink bandwidth requirement that is associated with the selected first service type;

determining a downlink bandwidth requirement that is associated with the selected second service type;

calculating an uplink/downlink bandwidth requirement ratio based upon the uplink and downlink bandwidth requirements;

allocating uplink and downlink time slots in a frame in response to the calculated uplink/downlink bandwidth ratio; and

periodically enabling uplink transmissions during the allocated uplink time slots and downlink transmissions during the allocated downlink time slots.

92. (Amended) A method for adaptively duplexing transmissions in a communication link using a time division duplexing scheme wherein transmissions are communicated in an uplink direction during uplink time slots and wherein transmissions are communicated in a downlink direction during downlink time slots, the method comprising:

selecting a quality of service associated with the communication link;

determining an initial uplink bandwidth requirement and an initial downlink bandwidth requirement of the communication link based on the selected quality of service;

calculating an initial uplink/downlink bandwidth requirement ratio based upon the initial uplink and initial downlink bandwidth requirements of the link;

allocating initial uplink and downlink time slots in a frame in response to the calculated initial uplink/downlink bandwidth ratio;

transmitting information during the initial uplink and downlink time slots;

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determining an actual uplink bandwidth requirement and an actual downlink bandwidth requirement based on actual bandwidth utilization during the initial uplink and downlink time slots;

calculating an actual uplink/downlink bandwidth requirement ratio based upon the actual uplink and actual downlink bandwidth requirements of the link;

allocating actual uplink and downlink time slots in response to the calculated actual uplink/downlink bandwidth ratio; and

transmitting information during the actual uplink and downlink time slots.